

**REMARKS**

Reconsideration of the present application is respectfully requested in view of the following remarks. Prior to entry of this response, Claims 19-30 were pending in the application, of which Claims 19 and 29 are independent. Claims 16-17 were previously withdrawn from consideration, and Claims 1-15 and 18 were previously canceled. In the Final Office Action dated October 21, 2003, Claims 19-20, 24, and 27 were rejected under 35 U.S.C. §102(b), Claims 21-22, 25-26, and 28-30 were rejected under 35 U.S.C. §103(a), and Claim 23 was objected to, but was deemed allowable if rewritten in independent form including all the limitations of the base claim and any intervening claims. Following this response, Claims 19-20 and 22-30 remain in this application. Applicant hereby addresses the Examiner's rejections in turn.

I. Rejection of the Claims Under 35 U.S.C. § 102(b)

In the Final Office Action dated October 21, 2003, the Examiner rejected Claim 19 under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,932,523 ("*Fujikami*"). Claim 19 has been amended to further define and clarify the invention, and Applicant respectfully submits that the amendment overcomes this rejection and adds no new matter. Claim 21 has been canceled without prejudice or disclaimer.

Amended Claim 19 is patentably distinguishable over the cited art in that it recites, for example, a superconducting cable comprising at least one layer of tapes of superconducting material circumferentially wound side by side on a support at a prefixed distance so that gaps are circumferentially formed between adjacent tapes, wherein a non-superconducting material is interposed between the adjacent tapes to

partially fill the gaps and configured to allow a space in the gaps, the non-superconducting material having a thickness differing from that of the tapes of the superconducting material of an amount not higher than one of  $\pm 15$ .

In contrast, *Fujikami* at least does not disclose that a non-superconducting material is interposed between the adjacent tapes to partially fill the gaps and configured to allow a space in the gaps, the non-superconducting material having a thickness differing from that of the tapes of the superconducting material of an amount not higher than one of  $\pm 15$ . For example, in the embodiment of FIG. 6, *Fujikami* illustrates insulation 50 completely filling gaps between superconducting tapes 51 and including no space in the gaps. Because insulation 50 completely fills the gaps, *Fujikami* at least does not disclose a non-superconducting material configured to allow a space in the gaps, as recited in Claim 19.

Furthermore, like the embodiment of FIG. 6, the embodiment of FIG. 7 does not disclose Claim 19. *Fujikami* illustrates in FIG. 7 a thin insulating tape 70 and a thick superconducting tape 71. Clearly, from FIG. 7, the insulating tape 70 does not have a thickness differing from that of the tapes of the superconducting material of an amount not higher than one of  $\pm 15$ , as recited in Claim 19. Moreover, the configuration of FIG. 7 requires an insulating tape 70 having a thickness much smaller than the superconducting tape 71. An insulating tape 70 having a thickness differing from that of the tapes of the superconducting material of an amount not higher than one of  $\pm 15$  would not result in the configuration achieved in FIG. 7 of *Fujikami*. Accordingly, independent Claim 19 patentably distinguishes the present invention over the cited art, and Applicant respectfully requests withdrawal of this rejection of Claim 19.

Dependent Claims 20 and 22-28 are also allowable at least for the reasons above regarding independent Claim 19, and by virtue of their dependency upon independent Claim 19. Accordingly, Applicant respectfully requests withdrawal of this rejection of dependent claims 20 and 22-28.

II. Rejection of the Claims Under 35 U.S.C. § 103(a)

In the Office Action, the Examiner rejected Claim 29 under 35 U.S.C. § 103(a) as being unpatentable over *Fujikami* in view of U.S. Patent No. 4,184,042 ("*Vulis*"). Claim 29 has been amended to further define and clarify the invention, and Applicant respectfully submits that the amendment overcomes this rejection and adds no new matter.

Amended Claim 29 is patentably distinguishable over the cited art in that it recites, for example, a superconducting cable comprising a phase conductor including at least a first layer of tapes of superconducting material circumferentially wound side by side on a support at a first prefixed distance so that first gaps are circumferentially formed between adjacent tapes of the phase conductor wherein a non-superconducting material is interposed between the adjacent tapes to partially fill the first gaps and configured to allow a space in the first gaps, the non-superconducting material having a thickness differing from that of the first layer of tapes of the superconducting material of an amount not higher than one of +/-15, and a return conductor including at least a second layer of tapes of superconducting material circumferentially wound on a support side by side at a second prefixed distance so that second gaps are circumferentially formed between adjacent tapes of the return conductor.

In contrast with Claim 29 and as stated above, *Fujikami* at least does not disclose that a non-superconducting material is interposed between the adjacent tapes to partially fill the first gaps and configured to allow a space in the first gaps, the non-superconducting material having a thickness differing from that of the first layer of tapes of the superconducting material of an amount not higher than one of +/-15. Furthermore, *Vulis* does not overcome *Fujikami*'s deficiencies. *Vulis* merely discloses an annular superconducting shield. Like *Fujikami*, *Vulis* at least does not disclose a non-superconducting material is interposed between the adjacent tapes to partially fill the first gaps and configured to allow a space in the first gaps, the non-superconducting material having a thickness differing from that of the first layer of tapes of the superconducting material of an amount not higher than one of +/-15.

Combining *Fujikami* with *Vulis* would not have led to the claimed invention because *Fujikami* and *Vulis*, either individually or in combination, at least do not disclose or suggest a non-superconducting material is interposed between the adjacent tapes to partially fill the first gaps and configured to allow a space in the first gaps, the non-superconducting material having a thickness differing from that of the first layer of tapes of the superconducting material of an amount not higher than one of +/-15, as recited by amended Claim 29. Accordingly, independent Claim 29 patentably distinguishes the present invention over the cited art, and Applicant respectfully requests withdrawal of this rejection of Claim 29.

Dependent Claim 30 is also allowable at least for the reasons above regarding independent Claim 29, and by virtue of its dependency upon independent Claim 29.

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Accordingly, Applicant respectfully requests withdrawal of this rejection of dependent Claim 30.

III. Conclusion

Applicant respectfully requests that this Amendment After Final be entered by the Examiner, placing the claims in condition for allowance. Applicant respectfully submits that the proposed amendments of the claims do not raise new issues or necessitate the undertaking of any additional search of the art by the Examiner, since all of the elements and their relationships claimed were either earlier claimed or inherent in the claims as examined. Therefore, this Amendment should allow for immediate action by the Examiner.

Finally, Applicant respectfully submits that the entry of the Amendment would place the application in better form for appeal, should the Examiner dispute the patentability of the pending claims.

In view of the foregoing remarks, Applicant respectfully submits that the claimed invention, as amended, is neither anticipated nor rendered obvious in view of the prior art references cited against this application. Applicant therefore requests the entry of this Amendment, the Examiner's reconsideration and reexamination of the application, and the timely allowance of the pending claims.

In view of the foregoing, Applicant respectfully submits that the pending claims, as amended, are patentable over the cited references. The preceding arguments are based only on the arguments in the Official Action, and therefore do not address patentable aspects of the invention that were not addressed by the Examiner in the

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Official Action. The claims may include other elements that are not shown, taught, or suggested by the cited art. Accordingly, the preceding argument in favor of patentability is advanced without prejudice to other bases of patentability.

Please grant any extensions of time required to enter this amendment and charge any additional required fees to our Deposit Account No. 06-0916.

Respectfully submitted,

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Dated: November 14, 2003

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